

Notice of Allowability

Application No.

10/700,853

Examiner

Thanh Y. Tran

Applicant(s)

WICKER, THOMAS E.

Art Unit

2822

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/7/04.
2. ☒ The allowed claim(s) is/are 1-9.
3. ☒ The drawings filed on 05 November 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

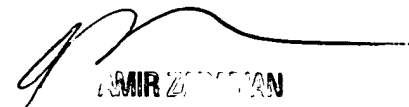
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 11/25/03
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


AMIR Z. KHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

In claim 1, line 5, "at lease" has been changed to: --at least--.

Allowable Subject Matter

2. Claims 1-9 are allowed.
3. The following is a statement of reasons for the indication of allowable subject matter: claim 1 recites, inter alia, "*a method of processing semiconductor substrates and reducing particle contamination and/or process drift during consecutive processing of the substrates, the method comprising the steps of: placing a substrate on a substrate holder in an interior space of a plasma processing chamber, the processing chamber includes at least one slip cast part having a surface exposed to the interior space, the slip cast part having free silicon contained therein and a protective layer on the surface which protects the silicon from being attacked by the plasma in the interior space; removing the substrate from the processing chamber; and consecutively processing additional substrates in the processing chamber while minimizing particle contamination of the substrates and/or reducing processing drift during the processing step as a result of protecting the free silicon from attack by the plasma*"; and in the combination with other claimed features.

1. The art of record does not disclose the above limitations, nor would it be obvious to modify the art of record so as to include the above limitations.

Kennedy et al (U.S. 6,227,140) teaches in figures 1-3 a method of processing a semiconductor substrate having a heated ceramic layer, Kennedy et al does not teach the method comprising: protective layer on the surface of the slip cast part to protect the silicon from being attacked by the plasma in the interior space of the plasma processing chamber.

Benjamin et al (U.S. 5,820,723) teaches in figures 1-4 a method comprising a plasma processing chamber; Wicker et al (U.S. 5,863,376) teaches in figure 1 a temperature controlling method and an apparatus for a plasma processing chamber. They do not teach the method comprising: a protective layer on the surface of the slip cast part to protect the silicon from being attacked by the plasma in the interior space of the plasma processing chamber; and removing the substrate from the chamber, and consecutively processing additional substrates in the processing chamber while minimizing particle contamination of the substrates.

Wicker et al (U.S. 6,251,793) teaches a particle controlling method for plasma processing chamber comprising the steps of: processing the substrate by supplying process gas to the processing chamber and energizing the process gas into a plasma state in the processing chamber; minimizing particle contamination during processing of substrates. However, Wicker et al (U.S. 6,251,793) does not teach the method comprising: a protective layer on the surface of the slip cast part to protect the silicon from being attacked by the plasma in the interior space of the plasma processing chamber.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh Y. Tran whose telephone number is (571) 272-2110. The examiner can normally be reached on M-F (9-6:30pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian can be reached on (571) 272-1852. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TYT


AMIR ZARABIAN
SUPERVISOR
TEC
2822